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an M C  
ESSAY  
Descriptive  
of the  
Quadrupeds  
of  
British North America,  
With

Their Generic, and Specific,  
Characters, modes of life, and  
the uses to which they can  
be applied.

(By Charles Fothergill Esq.)

"A patient pursuit of facts, and"  
"a cautious combination and"  
"comparison of them, is the duty"  
"of man, to which man is sub-"  
"jected by his Maker, if he"  
"wishes to attain some know-"  
"ledge."











To the Members of the  
Natural History Society  
of  
Montreal

Gentlemen

Conformable to public notice, I have given the title proposed by your Society, to this Essay, although more comprehensive, perhaps, than the contents of the following pages will be found to justify. To perform all that is implied by the title would require, indeed, a much more serious labour than it is at present in my power to bestow; and, if a choice had been mine, I should have preferred the less responsible cognomen of - "A Descriptive Catalogue of the Lacustrine Insects of British North America" - however, such as it is, I have great pleasure in laying this Essay before the Society; not so much from the hope of approval, as for the opportunity it gives me of congratulating the Members upon their institution and



and the progress they have already made towards elucidating the Natural History of a Country as yet but little known to the natural philosophers and literati of Europe -

When I state that from infancy I have been strongly attached to the pursuits which are now so liberally and effectually fostered by your Society; and, that I have been far more than thirty years engaged in clearing up doubtful points in the Natural History of the British Empire; and, further, that it was chiefly with this view, I came to the Canadas, as an extensive and important part of that great and glorious dominion -; it may be readily imagined how delighted I was to find that such a Society was formed - If I have been backward in hailing its institution, by some tribute of respect, before this time, I can only plead the want of leisure and opportunity, and a diffidence as to what in my power might be most acceptable -

— This little Essay, such as it is, is my first, but, should it be approved, I hope not my last, offering; and, in the earnest hope that the Society will flourish to the utmost extent of all our wishes, and be the means of discovering  
and

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and bringing to light some of the immense treasures of Nature, in all her three Kingdoms, Animal, Vegetable and Mineral, which are undoubtedly to be found in her great store-house upon this continent - and particularly in the Canadas

I have the honor

to subscribe myself

the Society's  
obliged

and most obedient humble servant

The Author

Ontario Cottage  
N. C.

Feb<sup>y</sup> 1. 1830





# Preliminary Remarks

British North America, in its most extended limits, from the eastern shores of Newfoundland and Labrador on the Atlantic, to the Columbia River on the Pacific; and, from the Point of Pelee on Lake Erie to the Polar Seas; is more extensive than all Europe; and, <sup>as</sup> it contains every description of soil and scenery, if not of climate; — with its woods and mountains; — its vallies and plains, — rocks, seas, lakes, and rivers innumerable — so vast a region may be readily supposed adequate to the subsistence of a great variety of living creatures; and, to enumerate as many Quadrupeds as are to be found in either of the more ancient and better known quarters of the globe; — but, whether equally valuable to civilized man, time and further observation and experiment must determine: — the fur-yielding animals, the Sable alone, perhaps, excepted, are unquestionably superior; and those have given rise to an extensive and very lucrative branch of commerce — I know not, indeed, that we ought to except the Sable, since our shores and large rivers on the Pacific give us the Sea Otter, whose fur excels in fineness, richness, and costliness, that of all others —



As I do not understand it to have been within the intention of the Society to treat of Extinct Animals, or of those supposed to be extinct, in the Essay for which the honorary medal has been proposed - I have not included them in the following catalogue, although there are many reasons for supposing that some of the animals attributed by Cuvier, and others, to a former world, exist in the northern, or north-western, and unexplored regions of this continent. Of these the Mammoth, and Great Elk of the Antediluvian World, are the most interesting, and whose actual existence all enthusiasts in the pursuits of Natural History are still unwilling wholly to disbelieve: - ~~and~~, As these subjects may hereafter occupy the attention of the Society in a manner the most satisfactory - I may be excused for hinting, on the present occasion, at the most likely region in the known world for successful results to such an inquiry; - and, that region is undoubtedly our north-western territory on this continent; a region much less known than are the northern parts of Europe and Asia which have been hitherto conjectured as the scenes <sup>where</sup> ~~of~~ those stupendous creatures moved, when in life, and where their skeletons, some of them clothed with flesh, and even with hair, have been found -



Indian traditions and rumours are yet strong and lively as to the actual existence of the Mammoth; though it must be confessed some of the supposed strongest indications have been found to originate from another cause; these are the enormously large tracks, sometimes observed on the partially frozen surface of the snow, far away in the north-west, towards the Rocky Mountains, and which are now known to be occasioned by the Gri-gly Bear - whose foot is very large not infrequently being found nearly twelve inches long, by nine or ten inches wide. When this huge and ferocious animal treads on the glassy surface of the partially frozen snow or ice, that is incapable of sustaining his weight - he breaks down the surrounding incrustation to a considerable extent - leaving an impression quite sufficient to induce the supposition that an animal of much larger bulk had passed that way. These tracks have frequently been attributed to the Mammoth by our Indians of the interior, who have, however, many other proofs to adduce for the existence of that vast quadruped. It is not long since, indeed, that a letter (dated Prarie du Chien, and which was published in many of the American newspapers, actually announced his appearance not far from a stream called New-wood-River, which empties into St. Peters -



From the gentlemen connected with the Hudson's Bay, and North-west, company - resident in Montreal; and, by holding out those facilities, rewards, and honours which it is in the power of the Society to bestow, much light may be thrown upon these, at present, dark but highly interesting subjects; - and, should the Society, even after a long series of years, do nothing more than give to Zoology, the living Mammoth, and the Antidiluvian Elk, and perhaps the huge Megatherium; - and to Agriculture, Manufactures, and Commerce. The domesticated Bison, and Big-horned Sheep of the Rocky Mountains - all of which (the two last being quite practicable) it may be possible, for aught that is known, to do; - should the Society, I say, accomplish these things, alone, it would be rendered justly famous throughout the world -

As to the antidiluvian Elk, I am not ashamed to confess that to search for it was one of my objects in visiting this portion of our empire, being satisfied that it is here we have the best chance of discovering it in a living state. Hitherto it has been found only as a fossil, and chiefly in the bogs of Ireland though it has been occasionally dug up in England, France, and Germany; and, during my sojournment in the Isle of Man, I had the good fortune to see a very perfect specimen that was discovered in a marble-pit near Kirk Michael in that Island - at first the



the head only appeared, but afterwards the  
 entire skeleton, though in detached parts,  
 was found; and, in such a position as  
 to show that the animal had perished  
 in the act of swimming. This specimen  
 was so fine and perfect, and, compar-  
 atively so recent, as to be scarcely  
 fossilized. Of its skull and horns I  
 made an exact drawing, with the  
 measurements of its various parts, - and  
 as the figure given in the Philosophi-  
 cal Transactions, and even that which  
 is engraven in the splendid work of  
 Cuvier, as well as every other repre-  
 sentation of this majestic species,  
 that I have seen, is extremely in-  
 accurate; and, as it may facilitate  
 any future designs which the Society  
 may entertain towards a discovery of  
 the living specimen - I beg leave to pre-  
 sent <sup>it</sup> ~~it~~ <sup>to the Members</sup> with a pencil sketch  
 taken from my drawing, although it  
 is to be engraven for my "Memoirs  
 of the Natural History of the British  
 Empire" now preparing for the press.  
 The sketch is sufficiently accurate  
 and will accompany this Essay - Larger  
 specimens, some of them to the extent  
 of fourteen feet from tip to tip, be-  
 tween the horns, have been discovered  
 in Ireland, (see Wright's Louisiana),  
 but I have neither seen, nor heard  
 of any more perfect than those of  
 which I now send the drawing.

In a work that was published  
 towards the latter end of the 17<sup>th</sup> century.



(the exact date I forget, having lost my copy, but I think it was the year 1661. and the book was a small one with woodcut) - and entitled - "New England's Rarities" - a species of Deer is described as inhabiting the eastern States of what is now the Union, that was twelve feet high! - If so superb an animal ever had existence in the New England States we are at least not far from the country where we ought to look for it, and we must allow that it is only an animal of some such dimensions that could be able to support horns of so great a magnitude as those now alluded to - horns that might sweep the entire breadth of a common turnpike road of all opponents. It is true the eminent Cuvier tells us - "there is very little chance indeed of our ever finding alive those which have only been seen in a fossil state" (see his Theory of the Earth); and Professor Jamieson, his commentator, further says of the vast Elk we are alluding to, - "it is most certainly a different species from any of those that at present live on the earth's surface, and may therefore be considered as extinct -

But I say let "nihil desperandum" be our motto - We ought not yet to despair seeing this superb Cervus in propria persona - Wright says they were destroyed in Ireland by a "pestilential murrain" - but he gives us no proofs - and a similar cause has been adduced for their extermination in Lapland - We



We know, indeed, that all Deer are subject to a contagious disorder which has been termed a murrain, and the deer in question may have been so cut off in Europe - but it does not follow that the whole race has been so exterminated in America; and if there is any truth in the existence of the uncommon large Deer of "New England's Rarities" or in that mentioned in Charlevoix's "diverting tradition" as he calls it (see p. 199. Vol. 1. - of his work on Canada) which is described as being so great an Elk, that in comparison with him all others are "as pismires" - then may be taken as suggestions of the actual existence of an enormous Deer upon this continent too imposing, in conjunction with other facts, to be hastily relinquished - especially as Indian reports and traditions are seldom without some truth for their foundation - The nearest approach in size, perhaps, to the animal looked for, is the Wapiti Deer of this Spay - which, at first sight, I really thought was the long sought Elk of Ireland - particularly as the specimens I saw, although still very young, had gained the height of nearly 15 hands, or 5 feet - with a proportionable length - giving the magnitude, strength, and appearance of ordinarily sized horses - They had great muscular power, and were quite capable of wielding horns of unusual magnitude -

Something must now be said of the classification, order, and arrangement adopted



adopted in this little work. Buffon was apt to ridicule his celebrated and more scientific rival, Linnaeus, for what he thought was too close an adherence to arbitrary rules and distinctions, in the science which has been so essentially advanced by their respective labours; and, as being always pedantic, and sometimes ridiculous. But, notwithstanding the censure of the eloquent naturalist of France, the world has done ample justice to the accurate Swede, whose merits stand on a foundation as durable as will be that of all literature and science.

Neither of these eminent men, however, are without great and glaring faults; many of which have been pointed out from time to time by other naturalists who have improved on their systems. To say nothing of Ray, our countryman, who preceded them, and whose merit was very great - we have had our Pennant, whose distribution of Quadrupeds, in particular, I think greatly preferable to the arrangement of any other writer, - and I have, therefore, for the greater part pursued his method by adopting his four divisions of hoofed, digitated, pinnated, and minged quadrupeds.

1.

Those that are either whole hoofed, or that are cloven footed; but the Horse only has a hoof of one entire piece -

Generic  
Enumeration

1. Horse
2. Ass
3. Sheep
4. Goat
5. Antelope, or Stag.
6. Hog



II.

Those which have  
just divided into  
two, and are clasped  
in sections according  
to their different for-  
mations and pro-  
pensities:— those that  
are rapacious have  
6 or more cutting teeth  
in each jaw, with large  
canine teeth separated  
from them:— and  
those that are herbi-  
vorous, or frugivorous,  
and which have no ca-  
nine teeth— and only 2  
cutting teeth in each  
jaw—



Generic Enumerations

- 7. Dog
- 8. Cat
- 9. Bear
- 10. Badger
- 11. Opossum
- 12. Weasel
- 13. Otter
- 14. Hare
- 15. Beaver
- 16. Porcupine
- 17. Marmot
- 18. Squirrel
- 19. Weasel
- 20. Rat
- 21. Shrew
- 22. Mole
- 23. Hedgehog

III

Or, Pinnated, living  
chiefly in water,  
and preying partly  
on fish, and partly  
on herbage—

- 24. Walrus
- 25. Seal



IV.

Winged, or the  
connecting link  
between quadru-  
pede and birds—

- 26. Bat





I have taken the above twenty-six genera to illustrate the four divisions because they are all found in the British dominions on this continent - So much of the Linnaean method, as appeared indispensable, is also adopted in the following pages - but no more, for, as ~~it is unnecessary~~ <sup>it is unnecessary</sup> to touch on the condition of the human aborigine of our Canadian forests, in this Essay (which is confined to quadrupeds), I may with the greater propriety, reject the first Linnaean order (Primates) from these pages; <sup>and in this rejection</sup> ~~and in this~~ <sup>rejection</sup> I have much satisfaction - because I am of opinion with those who consider it absurd to rank men, and bats, and whales, in the same order, merely because they are suckers of milk, when in a state of infancy; and, ~~because they~~ <sup>because they</sup> have some ~~organic~~ <sup>otherwise</sup> organic resemblance. As the natural <sup>legitimate</sup> lords of creation we can have no objection to stand first on the list of animated beings; but, whilst there are elephants, and horses, and many other creatures highly gifted, as to their intellectual capacities, and general usefulness, and importance, in the scale of creation - it seems preposterous to give a flying mouse, or a fish, (no matter how large), the same rank with ourselves. I have therefore placed the Bats where I think they ought to be, and, with the Cetacea, we have nothing to do in this Essay -

But whatever may have been the errors of the illustrious Swede; if, indeed, errors they can be termed - they are not to be compared



with those fallen into by the fanciful, but eloquent, Frenchman throughout his celebrated work; but no where more conspicuously, than in his comparison of animals common to both continents of the old and new world:— In his dissertation upon this subject, which seems with assertions as unscientific as they are remote from truth, he says, that all animals transported from Europe to America, including those that are domestic, as well as those that are ferce nature, immediately become smaller and otherwise degenerate—surmising up with these singularly vague and untrue, yet eloquent periods—\*

"In this New World, therefore, there  
 "is some combination of elements and  
 "other physical causes, something that  
 "opposes the amplification of animated  
 "nature:—there are obstacles to the  
 "development, and perhaps to the form  
 "ation of large germs. Even those which,  
 "from the kinder influences of  
 "another climate, have acquired their  
 "complete form and expansion, shrink  
 "and diminish under a niggardly sky  
 "and an unprolific land, thinly peopled  
 "with wandering savages, who, instead  
 "of using this territory as a master,  
 "had no property or empire; and having  
 "subjected neither the animals, nor  
 "the elements, nor conquered the seas,  
 "nor directed the motions of rivers, nor  
 "cultivated the earth, held only the  
 "first rank among animated beings,  
 "and existed as creatures of no consideration  
 "in Nature, a kind of weak  
 "automatons, incapable of improving

New World has been drawn by his equally dis-  
 -tinguished countryman, the Abbé Raynal—!



"or seconding her intentions. She treats them  
 "like a step mother rather than a parent,  
 "by denying them the invigorating sentiment  
 "of love, and the strong desire of multiplying  
 "their species -" &c &c (here follows a long  
 "figure of absurdities -) and then again,

"There man makes no exception to what  
 "has been advanced. Nature, by denying  
 "him the faculty of love, has abused and  
 "contracted him more than any other  
 "animal. But before examining the  
 "causes of this general effect, it must  
 "be allowed, that if Nature has dimi-  
 "nished all the quadrupeds in the New  
 "World, she seems to have cherished  
 "the reptile and enlarged the insect  
 "tribes; &c &c &c" One more

specimen and I have done with  
 Buffon's famous Dissertation on the  
 animals common to both continents,  
 at least for the present

"In these melancholy regions (of North  
 "America) nature remains concealed  
 "under her old garments, and never  
 "exhibits herself in fresh attire; being  
 "neither cherished nor cultivated by  
 "man, she never opens her fruitful  
 "and beneficent womb. Here the  
 "earth never saw her surface adorned  
 "with those rich crops which demonstrate  
 "her fecundity, and constitute the opu-  
 "lence of polished nations. In this -  
 "abandoned condition every thing -  
 "languishes, corrupts, and proves abortive.  
 "The air and the earth, overloaded  
 "with humid and noxious vapours,  
 "are unable either to purify themselves,  
 "or to profit by the influence of the



"the sun, who darts in vain his  
 "most enlivening rays upon this rigid  
 "mass, which is not in a condition  
 "to make suitable returns to his  
 "ardour. Its powers are limited  
 "to the production of moist plants,  
 "reptiles, and insects, and can afford  
 "nourishment only to cold men and  
 "feeble animals." !!

What can be more unphilosophical  
 and absurd?

These assertions have been ably rebutted  
 in that clever, sensible, philosophi-  
 -cal, and now scarce little work  
 entitled "Notes on Virginia" by Tho:  
Jefferson, formerly President of the  
 United States; - and I should scarcely  
 have noticed them in this place,  
 had it not been ~~unavoidable~~ <sup>necessary</sup>  
 to notice, and rebut, them,  
 still further, in various passages of  
 this Essay - after all that <sup>has</sup> been said  
 of the foibles of the greatest of French  
 naturalists, however, we must all  
 agree, with Jefferson, that he who  
 could thus speak, is entitled to im-  
 mortal honor - "J'aime autant  
 "une personne qui me relève d'une  
 "erreur, qu'une autre qui m'apprend  
 "une vérité, parce qu'en effet une  
 "erreur corrigée est une vérité -"  
 and so. speak Buffon!

Fearing to go beyond the limits of  
 what should be prescribed upon an occa-  
 sion like the present, I must hasten  
 to solicit the indulgence of the Society



in respect to the manner, brevity, and style of the Essay now submitted for their approval - After some debate with myself, as to the general plan, I deemed it best to follow the outlines of a small work on British Birds, published by myself for the use of Museums, and Collectors of Subjects in Natural History, more than thirty years ago - because, that arrangement had been approved by those best qualified to judge - and had now the test of experience; besides, it is one that can be readily enlarged upon at any future period, by those who may have the necessary inclination, leisure, and opportunity - Had more time been at my own command, at the present juncture, I could certainly have rendered this work much more perfect and comprehensive than it is - But, with large concerns pressing upon me, and demanding my constant and unwearied application - to say nothing of the serious legislative duties which at the present moment I have to perform - I have found it no small matter to steal a sufficient number of hours (and those chiefly in the night) from other duties, to throw together, and arrange, the contents of these pages; which, such as they are, I humbly present to the Montreal Natural History Society - as an unworthy, but a very sincere, offering; - and, so far from being chagrined, or disappointed, by any want of success - this hasty pro-  
= duction



may experience - in the full consciousness that it might have been rendered far more worthy of their acceptance, I shall rejoice to hear that a more successful candidate has been found -

"Vive, vale: si quid novisti rectius istis,  
"Candidus imperti; si non, his utere mecum."







An  
Essay  
Descriptive  
of the  
Quadrupeds  
of  
British North America  
or de

Class  
Mammalia.

Division I. { Comprehending those that  
are either whole hoofed;  
or, that are cloven footed:  
— but, the Horse, only, has  
a hoof of one entire piece.

Order I. Bellua

Character

Having obtuse front teeth in both jaws —  
Feet armed with hoofs that are entire  
in some species, and subdivided in  
others — The greater part subsist on  
vegetables

Genus I. Equus.

Six fore. teeth in each jaw; — these are erect,  
somewhat projecting, parallel, prominent; having  
one short tusk on each side of the jaws,  
leaving a considerable space between y tusk  
and the grinders and front teeth. Feet hoofs,  
and undivided.

Species

1. Equus — Caballus — Improved Arabian Horse,  
and all his varieties
2. Equus — Asinus — The Ass —
3. Equus — Mulus — The Mule —



## 1. Of the Horse.

Well is this noble animal entitled to the first place in our catalogue of animals; — magnanimous, — generous, — brave, — affectionate, — and without a single bad quality, <sup>unless</sup> it is such as may have been incident to an erroneous education, he is of the first utility to man, and is capable of the most extraordinary exertions, both as to speed and strength, and endurance, and he is alike serviceable in peace and war.

— The Horses of Canada have not descended from the same original stock, but may be divided into two distinct families. Those of the Lower Province have been derived chiefly from the original French stock brought into the country at its first settlement, more than two hundred years ago. Although these may be considered as more ponies, seldom exceeding 14 hands high, they are large horses in a small compass — being what is termed square-built, or broad-sett, very strong, active, hardy, and particularly excellent in harness. After no small experience of their worth, I can say it is my belief that, for their size, they are the best horses in the world — at least, I am very sure they are superior for all useful purposes, to our best Scotch and Welsh ponies, which have been so justly esteemed in Europe.

The Horses of Upper Canada have been imported chiefly from the United



States, and are of larger growth than those of the lower Provinces - These do not appear to be in any wise inferior to the stock from which they have sprung - I have now at Station in my stud (American-bred) that would be deemed a superior horse, even in Yorkshire -

- To these we may add a third race of horses; which are those of the plains, west of our Great Lakes and of the head waters of the Mississippi, and which are of Spanish origin - coming into the interior by the way of Mexico, and the isthmus of Darien - They are light and agile, of great bottom, and extraordinary speed - The Indians of the plains, and even some of those who dwell amidst the Rocky Mountains have large herds of them, ~~and they~~ and ~~they~~ are very skilful in their management ~~and they~~ - These horses have not been found farther to the north than  $54^{\circ}$  of latitude -

As the horse was originally a native of a warm climate (Arabia) - and he is naturally averse to low, and wet grounds, or to any great degree of moisture; - the climate of America, being generally dry, and in other respects favourable to his constitution, has proved propitious to a breed of excellent horses; and, it



it may be doubted whether there are better horses, either for speed or bottom, in any part of the world. But this circumstance cannot be surprising when it is considered that some of our very best English Race Horses have been imported, at various times, into that country. First, Jason, one of the most famous sons of the renowned Godolphin Arabian; - then Shark, who won more money upon the turf than any other horse of his time; - then Grey Diomed, once the property of his present Majesty, when Prince of Wales; - then Phenomenon, and a host of others of nearly equal celebrity were imported, in succession, from England into Virginia, and other parts of the Union - at a vast expense - serving in the end to raise the character of American Race Horses nearly, if not entirely, to a level with those of England.

As to the ponies of Lower Canada they daily perform feats of strength and bottom that would scarcely be credited at a distance. Horses from 13 to 14 hands high may be seen not infrequently drawing from 1500 lbs to a ton weight up the precipitous Mountain-Street at Quebec; and, all strangers who attend at the wharves of that City, and at those of Montreal, are struck with wonder on witnessing the performances of these extraordinary animals. Once upon an occasion of necessity, I drove a small Canadian pony that was barely 13 hands high, and no more than three years old - in a four-wheeled-waggon, containing luggage



to the weight of 600 lbs, besides the driver, through the worst roads I ever beheld - the distance of 115 miles in something less than 22 hours, including stoppages, and the delay that was occasioned by twice breaking down - and I had the satisfaction to find that my little pony was in no respect injured by his most extraordinary performance! - Even the Sporting Magazine of London can boast of no feat equal to this!!

I should have much pleasure in enlarging upon this subject, which is of great, indeed of national importance - were the occasion fitting but I must now only add that these horses are highly valued in our West India Islands; and, that a very lucrative barter-trade, with them, might be opened in that quarter -

- By an actual apexment in Upper Canada, and from the best computation that can be made in Lower Canada - the number of horses now in both provinces amount to about One Hundred and ten Thousand, of which Thirty-five Thousand are in the Upper Province -

## 2. Of the Apes -

Apes are of rare occurrence in the Canadas - a few may be seen occasionally about Montreal and Quebec; but, after a residence of nearly fifteen years I have never, by any chance, seen one in the Upper Province -



3. Of the Mule.

The Mule is also of unfrequent occurrence in the British possessions on this continent - and it is not probable that either the ass or Mule will ever be in much request in a country so highly favourable to an excellent breed of Horses -

— It has been thought unnecessary to say any thing of the specific character and uses of animals so well known as those just enumerated.



## Genus II. — Bos \*

The Ox.

### Character

Eight teeth in the lower jaw, — none in the upper, but in lieu thereof a callous membrane — Horns hollow, and curved, usually forward and upward — Ears large and flexible — Head and neck very powerful; — Dew lapped; — Four mammae —; Feet hooved and divided, or cloven; Chewing the cud is a striking characteristic of this ruminating family, — but its characters are determined by the horns and teeth — The habits are essentially herbivorous —

### Species

1. Bos — Taurus — Domestic Bull
- 2 — Bos — Bonassus — The Bison
- 3 — Bos — Moschatus — Musk Ox or  
The Musk Bison

\* This Genus belongs to the Linnean Order of Pecora, but is here ranked next to the Horse from its being next in the scale of importance to man —



# 1. Of the Domestic Bull Bos - Taurus.

Every useful variety of this valuable quadruped has been imported, from time to time, into the United States, both from Great Britain and Holland; and, from thence into our colonies - a few, indeed, have been brought direct from England, Scotland, and Ireland; and, in no part of the world can they succeed better than in the Canadas, provided a sufficient degree of skill is used in cropping the various breeds, according to what may be required, whether for the dairy, or for the grazing farm; and, that sufficient care is taken to obviate the effects of our long winters - Some well-experienced dairy-men from Cheshire, who have lately arrived, have declared their entire satisfaction, not only with the soil and climate of that part of the Upper Province of Canada, where they have settled, (the Newcastle District); but, also with the breed of cattle they have found ~~where~~, observing that they can make as good cheese, here, as in any part of their native country in England!

All this is highly gratifying; and, when it is stated, which can be done on the best authority, that Bullocks of the net weight of from 2000, to 2,500 lbs, are not unfrequently brought under the butcher's knife - Buffon's celebrated apotheca, (alluded to in our preliminary remarks,



that the domestic, as well as the wild animals common to both the old and the new continents, degenerate in the latter, and, as he says, — "cela sans aucune exception", — becomes, what indeed it is, an egregious error and an absurdity — Another of Buffon's erroneous assertions will be found in his affirming that the quadrupeds of America are comparatively few; whereas their number, I mean as to distinct species, will be found nearly equal to those of all the rest of the habitable globe besides — Buffon assumes the number of specifically distinct quadrupeds, on the whole earth, at about two hundred! — This catalogue, which is confined to those found within the British Possessions, will exhibit a list of very nearly half that number, without taking into consideration those that are fossil, or which may have belonged to a former world; and, that many more remain to be discovered there can be little doubt —

Had the name of Buffon been of less authority than it is, any allusion to his errors ~~might have been avoided~~ would have been avoided on the present occasion — But the more distinguished his character may stand as a naturalist — the more necessary it is to remove the errors he may have fallen into —

While upon the subject of Horned Cattle I may be excused for hinting that the old long-horned, or Lancashire, breed of Milk-Cows, will be found, on trial, more beneficial to Canadian Agriculturalists, as being more hardy than the larger or short-horned breed —



## 2. Of the Bison

### Bos Bonasus

Although our Bison, of the interior, (mis-named a Buffalo by the first European travellers and hunters on this continent), appears to differ in many particulars from the true Bonaros, or Bonasus of the ancients, —; if we may judge from the head that is figured by Gesner and by the description sent to that diligent naturalist by his learned friend D<sup>r</sup>. Lax — yet, upon the whole, it seems more nearly to resemble the animal described by Aristotle, and Pliny, and others, under that name, than any other with which we are acquainted. I have therefore ventured to retain it in preference to many other of the synonyms of modern authors —; and, perhaps, hereafter I may be able to prove it to be the same animal, altered only by accidental circumstances, and that it is not specifically distinct —

The essential or specific characters of the American Bison, are, — Horns, round thick, and wide at the base, directed at first laterally, from the sides of the head and then upwards, tapering rapidly to very sharp points; — Head short, broad and thick, with fiery eyes, a large beard, and most precious aspect; — His head, neck, shoulders, and superior parts are clothed with a thick, shaggy mane —; His withers are high and projecting, and his shoulders are very capacious, powerful, and elevated; — His back is arched and fleshy — forming a sort of hump, highly prized by the Indians as an article of food; — He is



deep and rather flat-sided, with short legs; - his hinder parts are light, and his tail short; - He is formed rather for strength than speed, although very agile. - He is an animal of vast stature and of corresponding strength - from 5 feet, to 5 feet 6, and even 5 feet nine inches high, at the withers; and from 7 feet 9 inches - even to 9 feet long; and weighing more than 2,000 pounds; being no uncommon magnitude for the Bulls of this species to attain - In the Fauna Americana it is stated that the largest weigh from 16,00 to 2,000 lbs., - but instances have been known of their weighing no less than 3,000 lbs. - !

- He is not naturally of a ferocious disposition - but rather the contrary, avoiding the face of man, and all the more sanguinary animals of the desert; - but, when wounded, or attacked in the rutting season, he is most desperate - and it is not <sup>then</sup> safe to meet his encounter - Their senses of hearing, of sight, and of smelling, are all acute; - and their attachments are singularly strong -

- No wild animal on this continent could be reclaimed with greater advantage to civilized man than the Bison. His vast strength enables him, in his single person, to accomplish more in the plough, or the draft, than the stoutest pair of Oxen - This has been fully proved by experiments made in the neighbourhood of Cincinnati, on the Ohio - He mingles readily with the common domestic breeds of horned cattle; and his flesh, as beef, is not of an inferior quality - It is said that



this animal does not now exist, in a wild state, to the eastward of the Mississippi — But, on the plains of the west, to the feet of the Rocky Mountains, and far into the regions of the north, and north-west — Bisons are found in perfect myriads — extending over the plains in vast herds, as far as the eye could reach — it would not be a difficult matter, therefore, through an Indian agency, to obtain as many of the young calves, at the proper season, as might be necessary to try the experiment of domestication on a broad and satisfactory scale; and, should the Society hereafter turn their attention this way, there is no doubt but an important, a valuable, and a lasting benefit would be conferred on the country —

### 3. Of the Musk-Ox

Bos Moschatus —

Following Blainville, D<sup>r</sup> Harlan has removed this species, in his Fauna Americana, to a new genus under the name of Oribos; though I must confess without apparent reason — at least in my judgment — I have therefore retained the older nomenclature, thinking it by no means advisable, in any point of view, to multiply genera and species unnecessarily. The fewer the distinctions, the greater the simplicity; and, simplicity is, or ought to be, the soul of science

— Pennant, Gmellin, Shaw, and Cuvier



have all considered this animal a Bos, and the trifling similarities which it has to the genus, Ovis - do not seem of sufficient importance to unite the families - The animal, itself, being of rare occurrence further south than the 65<sup>th</sup> degree of North Latitude, seldom comes under the notice of zoologists - but a most excellent description, together with ample particulars of its habits and manners, will be found in Hearn's Account of his journey to the mouth of the Coppermine River, - and it is probable that some further light may be thrown upon its natural history in Dr. Richardson's "Fauna Borealis Americana"; a work I have not yet seen; - but, I can scarcely imagine a more ample, or satisfactory account can be given of this animal, than that which is contained in Hearn's Book -

It might prove of service to the interests of agriculture, manufactures, and commerce, could some experiments be made on the long wool, and hair of this singular quadruped, to shew how far it might be rendered <sup>valuable</sup> ~~useful~~ in a national point of view - in situations, far to the north, where animals of a less hardy constitution would be unable to support existence - The musty flavour of its flesh is occasioned by a species of moss, or lichen, on which it feeds amongst the rocks and mountains that are its favourite haunts; - and, amongst which it roams in herds of twenty, or thirty, and sometimes more, even to the borders of the Polar Sea -



The specific characteristics of the Bos Moschatatus; are, — Horns large in proportion to the size of the animal, united at their base, on the top of the head, then falling down the sides of the face, and turning suddenly upwards at the points. Ears short. Eyes small, and remote both from each other and from the nose, which certainly more nearly resembles that of a Sheep than the muzzle of an ox. He may be said to be without a muzzle. Mouth small: — lips thick. Body deep and much elongated, covered all over with long black hair having a soft wool underneath of a fine ash-colour, that is equal in quality to the finest wool of Shetland, — and may hereafter prove serviceable in our manufactures. The legs are short and strong; — the hoofs larger before than behind, very strong and hard, the points converging towards each other and enabling the creature to hold a firm footing on the pointed rocks amongst which it springs and runs with surprising agility. The tail is short, and not easily discerned at a distance. The size of the animal is that of an ordinary cow —

Although the adults are scarcely fit for the table, the young calves afford a delicate food for man — and there is no doubt that the fleece has been hitherto undervalued — It is altogether a most curious and interesting animal, well deserving the attention of the Society —



# Genus III. Ovis

## The Sheep

Belonging to the Order Pecora

### Character of the Order

Furnished with several front teeth that are blunt and wedge-shaped. They have no front teeth in the upper jaw, and their feet have cloven hoofs. They have four stomachs, chew the cud, or ruminate, and feed entirely on vegetables.

### Generic Character

Eight fore teeth in the under jaw, - no canine teeth. Facial line usually arched, and without a muzzle. Horns concave, angular, wrinkled, and commonly turned backwards. All the species are covered with wool, and in some the wool is mixed with long hairs - variously twisted and interwoven. Legs slender. Feet hooved and pointed. They are herbivorous and graminivorous.

### Species

- 1 - Ovis - Aries - Common Sheep and its varieties.
- 2 - Ovis - ammon - Mouflon; Argali; Ibex; or Big horn Sheep of the Rocky Mountains.
- 3 - Ovis - Montana - The Silky haired Goat of the Rocky Mountains.



# 1. Of the Common Sheep and its varieties.

It cannot be necessary, in a brief essay of this kind, to say much on the value and importance of an animal so well known as the common Sheep. At the same time, however, it may not be unimportant to seize this opportunity to remark that none of our domestic animals in the British Colonies require more improvement than the breed of Sheep that has been introduced, through mistaken motives, amongst us.

There were but few of these valuable creatures in the Colonies when the rage for introducing the Merino Breed, into the United States, became epidemic, and extended to this country. It is true the wool of the Merino Sheep is particularly fine; - but when that is said - all is said, as to the value of the breed, to the farmer, and also to the consumer in these colonies. Our fine woollens will, for many years to come, be imported, as they ought to be, from the mother country; and, as wool is not one of our articles of export, nor likely soon, if ever, to be - the quality of the wool of our domestic Sheep here is an inferior object of consideration to a fine form, heavy carcass, quick feeder, and a better subject for the butcher's Knife - The Merino even was, and still is, an ugly, ill-conditioned, mis-shapen, hardy-grazing animal.



and subject to more diseases than any other breed - Fortunately for us our climate and soil are peculiarly favourable to the health and good condition of Sheep - and many of their diseases, so fatal in England, especially the foot-rot and Scab, are nearly, if not altogether, unknown in this country - These favourable circumstances ought to make us more assiduous and attentive to a class of animals so extremely valuable in our domestic economy - We have but few of the varieties so highly esteemed in England, in this country - none of the Stew Leicester (except two or three imported last summer) and none of the Improved Cheviot - which last in particular, I believe, would prove an invaluable acquisition to our agricultural interests - It is a handsomely formed, long-bodied, short-legged, heavily carcassed, quick feeding animal - with a heavy fleece and long staple - which would much better suit our little domestic manufactures, here, than the light, fine, matter wool of the Merino - But neither the time, nor the occasion, is fitting for us to say more on this subject at present - it nevertheless is of sufficient importance to merit the future consideration of the Society -



2 — Ovis — Ammon

The Mouflon; — Argali; — Ibex;  
Or Big-horn Sheep of the Rocky  
Mountains —

and

3 — Ovis — Montana

Or, the Silky-haired Goat of the  
Rocky Mountains —

I must crave the liberty of coupling these two rare animals together, in the remarks I have to make upon them, not because I consider them of the same species, but, because there is much confusion respecting them amongst the authors who have attempted to describe their characteristics, habits, and manners. The truth is, their haunts are so remote and inaccessible, that few, and those for the most part ill-qualified to judge, have had the necessary opportunities to determine their specific distinctions.

Only one single individual of the O. Montana has found its way to London, and that is in the Museum belonging to the Linnean Society — The O. Ammon, if it is admitted, as most writers agree to admit, that it is the same animal with the Argali of the Old Continent, is better known — though it is still a rare and valuable quadruped — Some authors, and those too of a just celebrity, rank this animal, some with the Sheep, some with the Goat and others with the Antelope family — It is on account of this uncertainty, and because



their affinities seem more nearly to approach the Sheep than either the Goat or the Antelope - that I have thought it best, for the present, to treat of them under the head where they are found - As I am taking some pains to elucidate their natural history I hope, hereafter, to be able to throw some important lights on the subject -

The Horns of the male O. Ammon are of enormous growth. They are curved first backwards, then forwards, and then upwards, with the points turned somewhat outwards or to one side - They are triangular at the base, and are deeply wrinkled for nearly half their length, then smooth. I have heard of a pair of these horns weighing nearly 80 pounds - and more than 3 1/2 feet long - The female too has horns but hers are much smaller, more slender, and more nearly resembling those of a common goat - Ears broad, pointed, and straight - Tail short - Body covered with hair of a grayish fawn colour, during summer, and whiter during winter - with a fine down or wool underneath. It is from 4 to 5 feet long - Height 3 feet 6 inches, to 3 feet 9 inches. Wonderfully active and swift - hardy, shy - pugnacious - Inhabit the Rocky Mountains from their southern extremity, on the confines of California, as far north as that tremendous chain of granitic Rocks have been explored -

The specific characters of the O. Montana may be thus drawn; -

Horns black, annulated, curved backwards, short and conical - Body much elongated - although short on the leg - In size rather exceeding the common sheep -



ears long and pointed - tail short and curved upwards. - The whole body is covered with long, white, silky hairs - having their base thickly beset with a down, or wool, of the most exquisite softness - superior, as it is said, in fineness, to the wool of any known animal - not excepting the famous goat of Cashmere -

- This species is not found so far to the southward, although it inhabits the same range of mountains, as the O. Ammon - but is common from the 30<sup>th</sup> to the 60<sup>th</sup> parallels of north latitude - It is particularly numerous about the upper parts of the Columbia River, in our territory. - and the Society could scarcely confer a greater boon on modern zoology; and, perhaps on our agriculture, manufactures, and commerce - than by using their influence in obtaining specimens - living, as well as dead, through the agency of the North-west, and Hudsons-Bay Company - and their servants - and it is scarcely to be doubted that successful results must follow -

#### Genus IV - Capra

##### The Goat

Light incisor-teeth in the lower jaw - none in the upper - no canine teeth. Horns compressed, wrinkled, and directed upwards and outwards - ears pointed and straight - Body rather flat sided, and slender, and covered with long hair, without wool. Tail short and recurved upwards - legs short and strong - Chin furnished with a beard - Found in all the 4 quarters of the Globe



# 1. Capra — Hircus.

## Common Goat

Is an animal too well known to need any particular description in this place. Although a few individuals are scattered over most parts of the British North American Colonies — it is no where very numerous — nor is much attention paid to it. Nevertheless there are many parts of Nova Scotia, New Brunswick, and Lower Canada — in all the barren, mountainous, and rocky regions, indeed, of those provinces — where the breed might be cultivated with as much advantage to the lower orders of people as the inhabitants of many parts of Wales and Ireland derive from the same source — Young Kids afford the most delicate food — and their Dams yield abundance of sweet milk and wholesome cheese — and this description of stock has the advantage of being maintained at little or no cost —

## Genus V — Cervus —

### The Deer, or Stag

Of the order Rocora, already characterized

### Generic Characters

Horns at first fleshy, acutely sensible, cartilaginous, and covered with soft hair or down, afterwards solid, brittle, and more or less branched, rugged — and in some species palmated. They are annually renewed — Eight fore teeth in the under jaw — no canine teeth — Eyes clear, large, full, sparkling; — Body straight, light, and flat sided — Legs most delicately formed — light, but strong and nervous — Remarkable for having no gall bladder — All the species are herbivorous, though some will destroy and devour snakes — They are timid — salacious, affectionate — Inhabit both the old and new Worlds.



# Species

- 1 - Cervus - Alces - Moose - Deer, or Elk
- 2 - Cervus - Elaphas - The Stag, or Red Deer
- 3 - Cervus - Major - The Wapiti Deer
- 4 - Cervus - Canadensis } The Caribou  
Major - }
- 5 - Cervus - Canadensis } Super Caribou  
Minor - }
- 6 - Cervus - Macrotis - Great Eared, or  
Black tailed, Deer
- 7 - Cervus - Tarandus - Rein Deer
- 8 - Cervus - Virginianus - Virginian  
Deer
- 9 - Cervus - Antilocapra - Com<sup>n</sup> Antelope
- 10 - Cervus - Capreolus - Roe - buck

So great is the confusion of authors in respect of the various species of this elegant genus that it would require a volume of no small dimensions to treat satisfactorily of this interesting family alone - I have paid a good deal of attention to the subject, for the last fifteen years, and am only sorry that I have at present neither time nor space, in this brief essay, to explain with that fulness I desire - the reasons which have induced me to arrange the above nomenclature in the manner ~~which~~ I have done; but, that it is more correct than <sup>any specification to</sup> ~~can~~ be found in any single work, at present extant, I am pretty well satisfied time will shew - a few remarks will serve to determine the different species, in the above enumeration,



at least so many of them as are known  
to other writers - by their synonyms -

Of the first species, there is no doubt,  
its characters and habitats are well  
known - and all authors have agreed upon  
its scientific and trivial name - It is found  
in Newfoundland - Cape Breton - Nova Scotia  
New Brunswick - Labrador - Hudson's Bay  
and Lower Canada; - but, although occa-  
sionally seen in the colder parts of Up-  
per Canada, - it is, in that province,  
now a rare animal -

2. C. Elephas - Stag or Red-Deer - This is  
the C. Canadensis of Brisson - Linnaeus - and  
Gmelin - The Cerv du Canada of Perrault  
and Warden - The Stag of America of Catesby -  
The C. Major of Aud, and the Wapiti of  
Barton, Mitchell, Leach, and Warden, and  
also of Cuvier - I have preferred the  
Latin name that has been given to the  
common Stag, or Red-Deer of Great  
Britain, and many other parts of Eu-  
rope, - because I am satisfied that the  
Deer I mean under this name - and  
many of which I have discovered in  
small herds, in various parts of our  
colonies, here, is precisely the same  
animal with the C. Elephas of Eu-  
rope -

3. C. Major - The Wapiti Deer - This is the  
Deer I have alluded to in my preliminary  
remarks, and which has never been  
satisfactorily described - That Dr. Warlan  
supposes it to be the same animal  
with the last mentioned species - in his  
Fauna Americana - is obvious, by the  
synonyms he has given - But, the true  
Wapiti - which is a rare animal, and  
found only in the remote and unpre-  
sented deserts in the west, and north-  
west - where it roams in small herds,



and is exceedingly shy and of difficult approach, is a much larger quadruped than the common stag - it is indeed the largest, known, deer next to the Moose; and his horns are essentially different from those of the common stag - being palmated, more or less, in the upper branches, which is a characteristic unknown to the C. Elephas, whose antlers are uniformly round and pointed -

4. C. Canadensis Major. By this name I mean the true Caribou, or Common Deer of Canada, an animal often mentioned, and sufficiently common since the days of the first travellers on this continent, yet, to this hour, never described with any degree of accuracy - notwithstanding the scientific and judicious Jefferson, in his notes on Virginia, long since expressed his wish - "that naturalists who are acquainted with the reindeer and Elk of Europe, and who may hereafter visit the northern parts of America, would examine well the animals called there by the names of grey and black moose, caribou, original, and Elk -" &c. &c. (See his valuable little work on Virginia) - I have given the name of Canadensis because it is the commonest Deer of Canada, - and added the term Major - because all our Indians and hunters agree there are two kinds, one much larger than the other, and with a specific difference in the ramifications and direction of the horns. No thing can shew how little has been understood on this subject, than the confounding this species with the Reindeer, an animal altogether unknown in the southern, or settled, parts of Canada - whilst the Caribou almost every where abounds -



The horns of the Cariboo - furnish a very distinguishing characteristic. Differing materially from all others of the Deer-kind. rising near together, in front, immediately over the eyes. The stem retires backward over and behind the ears, as if to protect the neck. then recurving forwards. they bend inwards so far over the face that the last projecting points or antlers are perpendicular over the nose. - The old bucks have no less than twenty antlers, or branches and sometimes more. forming a beautiful crown over the head. and the stems of the horns are so conveniently curved, that the animal can readily bring all the sharp points to bear at once upon its enemy. In the old bucks a slight degree of palmation may be observed in the upper branches. - Thereafter I shall give a more full and particular account of this species many of which I have kept alive -

5. C. Canadensis minor, or Lesser Caribou. This species is also common throughout Canada and differs chiefly in having shorter and thicker legs - in never attaining the same stature - in the smaller size of its ears, and tail, and in having its horns less branched and flattened, and with fewer antlers -

6. C. Macrotis - or Large eared, or Black tailed, Deer - The ears of this species are very large, and covered with long hair and much rounded at the tip. The tail is so long, when hanging down, as to reach nearly to the hock - it is black above, and white below, and around it - and is a strikingly distinguishing characteristic. - Although



Although most numerous on the plains of the interior, and in the most unfrequented places - I have found this species even in the settled parts of Upper Canada; but not frequently.

7. C. Tarandus. or Rein-Deer. - As I have already observed, this species, one of the most celebrated and remarkable of the family to which it belongs, has been confounded with the Cariboo - by authors who ought to have known better. It is essentially different from the Cariboo - in having conspicuous brow-antlers on the horns, in its entire form, which is more heavy and clumsy, and in the formation of its feet, which are broad, loose, and spreading, and comparatively flat; whilst in the Cariboo the feet are high, narrow, firm, compact, and very sharp pointed. I very much doubt whether the Rein-deer has ever been seen so low down as the northernmost shores of Lake Superior - It is so certain that the Cariboo has been mistaken for the true Rein-deer; that, were it not for the testimony of some modern travellers of highly deserved consideration, who have explored the Arctic regions, belonging to the Crown of Great Britain, on this continent, and who say that the C. Tarandus is there found in a wild state - I should greatly doubt our having it <sup>at all</sup> - But, of this I am well assured, it is nowhere found in the settled parts of British North America.



47.  
9. C. Virginianus - or Virginian Deer.  
This species, which is widely spread from  
St James's Bay to Mexico - approaches more  
nearly to the fallow - deer of England  
than any other kind to be found in  
these colonies - It is the Cerv de la  
Louisiane of Cuvier, and has been  
well and often described -

9. C. Antilocapra - or common Antelope.  
This animal is the link between the  
Goat and the Deer - but having greater  
similitude to the last, than the first,  
I have placed <sup>him</sup> amongst the Cervi - His  
characters, however, are materially dif-  
ferent - His horns, triangular and wrinkled  
transversely at the base - rise in two  
prongs, separating as they rise, wider  
and wider - inclining outwards - and back-  
wards, at their extremities - About two  
thirds of their height is a short and  
sharp pointed antler projecting forwards.  
His eyes are very large - soft and full -  
reddish brown on the back - white on  
the belly - and inside of his legs and but-  
tocks - black on the sides, near the  
flank - Top of the head, cheeks, and lips  
white, - face chestnut, - There is also  
a white spot near the ear - He is a  
trifle larger than the Hoe-buck, being  
upwards of three feet long - from the ears  
to the root of the tail, and nearly three  
feet high - He is airy, light, agile, and  
swift to a surpassing degree - and can  
outrun all the animals of the plains  
of the interior, where he is found as  
far as the feet of the Rocky Moun-  
tains -

10. C. Capreolus, or Hoe-Buck - The small-  
est and most rare of the family on



this continent. Notwithstanding what various travellers have asserted. I entertained many doubts, until the last two years, that we really had the Goat-buck amongst <sup>us</sup>; but having heard much of a small deer <sup>by the report of</sup> ~~by the report of~~ the hunters, to which they gave the name of Spike-Horn - I became more particular in my inquiries - and the result has been a conviction that the true Capreolus may be ranked amongst our Canadian quadrupeds, although I have not yet obtained a perfect specimen - I have a pair of very perfect horns, taken from the head of an adult of this species, killed in Saskatchewan, which my Indian hunter declares to be exactly similar to the species sometimes met with, though rarely, in the remote hunting grounds in this province -

I have now gone hastily through the catalogue of this elegant and interesting family - scarcely an individual of which is not serviceable to man, either as food, or as contributing materials for clothing, or for various kinds of domestic manufactures. Many of the larger species were formerly used, even in England, in the craft, and for agricultural purposes; but, such has been the increase of other animals, better adapted for those purposes, in modern times - that we now scarcely call upon the Deer of the forest to supply their place - and it is probable in a few years, many of the species, now



Genus VI. — Sus.The Hog

Belonging to the order Bellua already characterized —

Generic Character.

Four cutting teeth in the upper, and six in the lower jaw — the points standing forwards, and converging. Two formidable tusks in each jaw — those in the lower of greatest magnitude — robust — triangular — and standing outwards — capable of inflicting the severest wounds — a long snout, prominent, movable, truncated. Feet armed with with divided, or cloven, hoofs — the animal standing upon the extreme points —

Species1. Sus — Scrofa — Domestic Hog

We have most of the varieties cultivated in Europe — and these colonies are very favourable to their growth and improvement. In combating Buffon's Theory Jefferson mentions a Hog in the United States that weighed 1200 lbs. — and since his time I have heard of one at New York that weighed upwards of 2000 lbs. but the largest I have known in this country did not exceed 900 lbs. — As swine are suffered occasionally to run at large and acorns, nuts, berries, fruits, and roots, their favourite food, are all so abundant in our forests — it is a little surprising — we have not already had our Wild Boar — as in Germany. But this is an event we may speedily look for — It is already the case in some of the Western States of the Union.



an  
Essay

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Division

II.

Or those which have feet divided into toes, and are classed in sections according to their different formations and propensities:— those that are rapacious have 6 or more cutting teeth in each jaw, with large canine teeth separated from them;— and those that are herbivorous, or frugivorous, and which have no canine teeth— and only 2 cutting teeth in each jaw.

### Order III. Fera

#### Character

Having mostly 6 front teeth in the upper and under jaw, somewhat conically shaped, with sharp canine teeth on each side, and grinders that terminate in pointed eminences— These have feet divided into toes that are armed with talons, or sharp, crooked, claws— Nearly all the animals in this order are rapacious, and live principally on the flesh of other animals—

### Genus VII. Canis

#### The Dog

#### Generic Character

Six front teeth in both jaws— Those on the sides are lobated, and longer than the intermediate ones— Six grinders in the upper, and seven grinders in the under, jaw— Two dog teeth in each jaw— one on each side, and separated from the rest— These are strong, curved, and very sharp pointed—



## Species

1. Canis - Terra-nova-re- } Newfoundland Dog  
-panti-
2. Canis - Indicus - Indian Dog
3. Canis - Lupus - Com<sup>n</sup> Wolf
4. Canis - Lycan, Major - Large Black Wolf
5. Canis - Lycan - Minor - Super Black Wolf
6. Canis - Latrans - Prairie Wolf
7. Canis - Nubilus - Dusky Wolf
8. Canis - Vulpes - Com<sup>n</sup> Fox
9. Canis - Argentatus - Silver Grey Fox
10. Canis - Vulpes Niger - Black Fox
11. Canis - Vulpes Cruic-gua - Cross Fox
12. Canis - Vulpes Glacialis - { Arctic, or  
Icy Fox
13. Canis - Vulpes Griseus - Com<sup>n</sup> Grey Fox
14. Canis - Vulpes Velox - { Small flying Fox  
of the Rocky Mts
15. Canis - Vulpes Arcticus - Arctic, or  
White Wolf

I find I have omitted in its proper place a small sized but very formidable species of Wolf that is found in considerable numbers between the 60<sup>th</sup> degree of North Latitude and the Polar Sea. It is of a bluish grey in summer and quite white as during winter - daring - ferocious - and destructive to the last degree - not and by no means afraid to attack man himself - whenever any favourable opportunity occurs -



after which he is named. In size and strength, and perhaps in courage, perseverance and fidelity, he is superior to all others. He is web-footed, and has no competitor (amongst dogs) in the sea - or whenever swimming or diving is required. His countenance is open, firm, and benevolent, and his whole carriage and deportment noble. The strength and docility of this animal render <sup>him</sup> superior to all other dogs as a beast of burden, or in the draft; and, for all the sagacity of his tribe, he is equally celebrated as for his other good qualities.

The *Canis Indicus*, or Indian Dog, may have been originally derived from the dogs of Kamrchatka - this I will neither dispute, nor absolutely deny; but he has characteristics so peculiarly his own as to entitle him to a specific distinction. The Indian dogs have much of the aspect of a small and savage wolf. Their ears are erect and pointed - long and sharp nose - tail long and bushy - usually of light and slender form - standing remarkably straight upon their legs and toes - Colour varied from black to grey, and white, and sometimes - piebald. They are very fierce and vigilant, and have a remarkable antipathy, almost insurmountable to Europeans, or indeed any white man. The Indians sometimes allow their bitches to receive the embraces of the Wolf, and sometimes of the Fox - and the offspring bears a resemblance accordingly - some being like wolves in miniature - with all their propensities, and others like Foxes, in their expressive eyes, and in their thinning qualities.



3. C. Lupus. Common Wolf - Of this well known destructive animal it is needless to say anything in this place - further than that I am sorry to remark its numbers have greatly increased in the upper Province of late years - and that some strong legislative enactment is absolutely necessary to preserve our farmers from their depredations -

4. C. Lycaon Major - Great Black Wolf - a most formidable animal of this description, capable of breaking the strongest traps of the hunter, occasionally makes his appearance in our settlements - He is much larger, stouter, and longer than the common wolf, and is made more like a greyhound - He is covered with a coat of long, shaggy hair, of an intense and shining black - and is generally seen alone or <sup>at</sup> most two or three together - He is quite distinct from the common Black Wolf, or C. Lycaon Minor, - and is, I believe, an hitherto undescribed species - The brief description I have just given was taken from a more lengthy one, drawn from a specimen killed within two miles of Hamilton Court-House about ten years ago -; since which <sup>time</sup> I have only heard of two or three individuals being seen - Fortunately, the animal is as rare, as he is formidable when met with -

5. C. Lycaon Minor. Lesser Black Wolf - This is the Loup cloire of Buffon, and the lycaon of Linnaeus, and Gmelin - It is also a rare animal in our North American Province, though more common than the last mentioned



species - He is less than the common wolf, and has more the appearance and air of a Fox. His countenance, too, has a milder aspect than that of the wolf. He is inclined to rocky and mountainous districts, and seldom makes his appearance in the settlements. His hair is finer, and more of a woolly nature, than that of the common Wolf - and is not long or shaggy - it is of one entire black.

6. C. Latrans, or Prairie Wolf - This species is the most common and numerous on the extensive plains west of our great Lakes - extending to the Rocky Mountains, and even beyond that stupendous range - General colour cinereous grey - varied occasionally with black, and sometimes with ferruginous - He has white lips, and yellow eyes, and the tip of his tail is black - He is somewhat larger than the common wolf - He is said to be the most sagacious of all wolves, and when found in large packs - is formidable even to the gigantic Bison -

7. C. Stubilis, or Dusky Wolf - This is also found in the same region with the last mentioned species. But he is much more robust and formidable. His colour is darker. His size greatly superior, either to the Prairie, or Common Wolf - some individuals having been found nearly six feet long, including the tail, and of a proportionable height - He emits an odour quite as disagreeable as that of the common Fox. His aspect is most ferocious, and he is altogether a



8. C. Vulpes, or Common Red Fox.

Of this well known animal nothing further need be said in this place than that its numbers are found to increase in proportion to the number of settlements - a fact that may be explained without much difficulty, since their means of subsistence increase in proportion as the lands are cultivated; and the early farmer, in this country, has something else to do than to go "a fox-hunting" -

- |   |  |
|---|--|
| 9. <u>C. Argentatus</u> . <u>Silver-Grey Fox</u>    | } For my own part I have little doubt but these are all entirely distinct species, |
| 10. <u>C. Vulpes Niger</u> . <u>Black Fox</u>       |  |
| 11. <u>C. Vulpes Crucigera</u> . <u>Cross Fox</u>   |  |
| 12. <u>C. Vulpes Glacialis</u> . <u>Arctic Fox</u>  |  |
| 13. <u>C. Vulpes Griseus</u> . <u>Com: Grey Fox</u> |  |

though I cannot be ignorant that many intelligent persons consider them mere varieties - But no Indian, or other hunter, acquainted with the habits of the animals, nor will any dealer in fur consider them the same - A London price - current alone is almost sufficient to convince any one of the vast difference there is in the quality of the fur - to say nothing of other variations, as to form - habit - manners and instinct -

The fur of the Black Fox is the most rare and valuable; - next to this comes the Silver Grey; then the Cross-Fox; and, lastly, the common Grey Fox, whose fur is so coarse as scarcely to deserve the name, <sup>of fur</sup> and it is seldom worth carrying to market; whereas the skin of a good Black



Fox sometimes brings the owner 15 or 20 £; a good Silver Fox £10; and a Cross-Fox from £1 to £2.10. and upwards - whilst a common grey fox would not be worth more than from 2/6 to 3/6 -

If there is a mongrel amongst the species enumerated it is the Cross-Fox, which it is not impossible may have been produced between a Silver Grey and a Red; or, a Black and a Silver Grey; or, a Black and a Red-Fox - But it is remarkable, they are all found in the same district, and yet remain unmixed - Keeping up their distinguishing characteristics - Their very names are sufficient to describe them - with the exception, perhaps, of the Cross-Fox, which is so named because of the black cross which passes over his shoulders and legs - his ears are also commonly black, and his tail nearly so, with a white tip - whilst his body and face are of a beautiful silver grey -

The Arctic Fox - is the same with the Isatis, of authors - and is confined to the arctic circle, and <sup>the</sup> shores of the Polar Sea - He is of a blue grey in summer, and white in winter, and is noted above all other foxes, for his wonderful sagacity -

14 - C. Vulpes Velox - This is a newly discovered, and very small, species inhabiting the Rocky Mountains, and their immediate vicinity. He is scarcely half the size of the common fox. His general colour



is ferruginous, mixed with grey, and his fur is of the most exquisite softness - He receives his name from the extraordinary speed at which he runs - which appears more like the flight of a bird, than the motion of a quadruped - He burrows in the ground, and never affects the cover of the forest - He is the burrowing fox of Lewis and Clark -

## Genus VIII. - Felis -

### The Cat

#### Generic Character

Six cutting teeth, all equal; - with two tusks in each jaw, and three more tusks on each side of both jaws - The tongue has rough papillae which point backwards - The feet are armed with talons, or hooked claws, that are lodged in a sheath, and can be projected or drawn in at pleasure - When thrown, or falling from a distance, these animals alight on their feet - The females have 8 pups, and are multiparous - Prey entirely on animal food, and are consequently eminently rapacious -

#### Species

1. Felis - Concolor - The Cougar
2. Felis - Onca - The Jaguar
3. Felis - Pardalis - The Ocelot
4. Felis - Canadensis - Canadian Lynx
5. Felis - Rufa - Red Lynx
6. Felis - Fasciatus - Striped Lynx
7. Felis - Montana - Mountain Lynx
8. Felis - Aureus -



9 - Felis - Catus - Common Cat

1 & 2 - Species - The jaguar and cougar are both of rare occurrence in Upper Canada, and I believe are unknown in the Lower Province. The cougar is the most common of the two, and both are more frequent, as we proceed westward towards the great plains of the interior. They are the lion and Tyger of this continent; and are in truth, most formidable animals. Since my residence in the Newcastle District a stout young man was struck by a cougar, from the bough of a tree under which he was gaping, and had a very narrow escape with his life - the accident occurred in the dusk of the evening, and in the Township of Hamilton. More recently a man was followed for some miles in the Township of Atoribus by one of these animals, and escaped only by the ferocious beast seizing a bag that the man was carrying on his back instead of the man himself. I have not known of more than

Felis Pardalis - The Ocelot. <sup>I do not know that this animal has ever been seen in any of our settlements; but individuals are occasionally found, as stragglers, along the feet of the Rocky Mountains, even as far as the 40th parallel latitude; and have been shot by our hunters. They are called by them the Cat-a-Mountain, and are very rarely met with - though common on the confines of Mexico, and towards California. It is said by the naturalists of the United States that the Ocelot is not found eastward of the Mississippi -</sup>



but the first species, only, is common - the others are all of rare occurrence - and the Striped, and Yellow species - have never been seen, that I have heard, or read, of, - north of the Red River settlements - nor very far from the feet of the Rocky Mountains; westward of that range, towards the Pacific, - they are more common - The Red, and the Mountain, Lynx - or Mountain-cat, as it is often called, have frequently been shot in Upper Canada especially in the western parts of this province - The Mountain Lynx has none of the pencils of hair upon the tips of the ears, which form so striking, and well known a characteristic of the ordinary species - The Lynx Canadensis is commonly found in all parts of the British Provinces of America - generally alone - but sometimes in pairs - It is fierce and powerful - and very destructive of all kinds of game that it can master, not even the Deer excepted - Its fur is not considered very valuable - the skin not being worth more than four or five shillings -

#### 9. F. Catus. Common Domestic Cat -

This useful domestic cannot be compared with in a country so swarming with mice - as the whole of Canada does from one extremity to the other - and we have a sufficient number in most of our houses - though our woods are literally alive with mice - I mention the fact, because it is surprising some of our cats have not become wild - from the facilities that are offered them; and yet, notwithstanding what authors affirm we have no wild-cats in Canada.



Genus IX. Ursus.The BearGeneric Character

Six fore teeth in the upper jaw, alternately hollow in the inside; - there are also six in the under jaw, the two lateral ones being lobated - The dog teeth are strong, conical, and solitary - Eyes furnished with a nictitating membrane - Nose prominent - ears erect - body round and robust - legs muscular - joints remarkably flexible - feet armed with enormous claws - tail short -

Species

1. Ursus - Cinereus - Large Grey, or Grizzly Bear
2. Ursus - Arctos - Brown Bear
3. Ursus - Americanus, } Long-legged  
Major } Black Bear
4. Ursus Americanus } Short-legged  
Minor } Black Bear
5. Ursus - Maritimus - Great White  
or Polar Bear
6. Ursus - Gulo - Wolverene
7. Ursus - Melis vel } American Badger  
labradoria }
8. Ursus - Lotor - Raccoon



1. U. cinereus. large Grey, or Grizzly Bear, by far the most formidable animal on this continent, or, perhaps, any where else. His invincible courage and ferocity, and blood-thirstiness, ingrafted on a frame so powerful, that the strongest Buffalo or Bison has no chance in his paws, ~~and~~ <sup>and</sup> makes him the dread of all other creatures - not excepting the lords of the forest themselves - who never dare to attack him single-handed - When a party of Indians determine on the encounter - they arm and paint themselves, as if for war, four, or five, or six, join together in the combat, and even then, are sometimes defeated with the loss of life. He is only found on the great plains of the interior, and is of vast magnitude. Adults of this species are sometimes found 9 feet long - with six feet circumference of body, near the fore arms - and four feet round the neck - feet 12 inches long, by 9 or 10 <sup>inches</sup> wide - armed with talons 4 inches long - with jaws and teeth of frightful magnitude, and eyes flashing a red fire on its enemy - It has been well named horribilis by some writers - for it is indeed a most terrible animal - cruel - vindictive - remorseless - and turns its back on no living creature - It is subject to much variety of colour - and never climbs trees - it is hibernating - differing from all other bears, (except the Great Sea, or Polar Bear) - it prefers animal food but will prey occasionally on roots, vegetables, & fruit.



61.

2. Ursus Arctos. Brown Bear. This species is also confined to the western parts of our territory - and never appears in our settlements; but it is common in the interior, and towards the north-west; - and, as far as has been observed, does not differ essentially from the Brown Bear of Norway - Germany and Switzerland - and other parts of Europe

3 & 4. The greater and lesser, or long legged and short-legged, Black Bears of America - These are the common Bears of the country; and, in some seasons, according to the quantity of wild fruits and nuts, are very numerous - It is certain there are two distinct species. The legs of the first are much longer, and the body lighter and more sleek, than those of the second species - the nose is also longer and uniformly of a reddish brown. The two kinds do not associate - and the long-legged kind are not so apt to climb trees as the other. Their carnivorous propensities, also, seem stronger - and some of them attain an enormous size - A male of this species was killed not long ago in the Township of Monaghan that weighed upwards of 400 lbs.

5. U. Maritimus - Great White, or Polar Bear - Found only on the shores of the Polar Sea - Hudson's Bay and the Coast of Labrador and Newfoundland - In no respect differing from the same species found in the Greenland Seas and the North of Europe



6. U. Gulo. Wolverine - This animal, so famous for its gluttonous propensities, cannot be said to be a common species in any part of our colonies - and yet it is occasionally met with in almost every part of them. When famished, it is extremely venturesome, and has been known to enter towns, in Upper Canada, of considerable magnitude. One of the last that was killed in this province, was detected in an orchard in the town of Brockville. Late writers on subjects of this nature have placed this animal in a new genus (Gulo) and designate it as the Gulo Arcticus - but I see no good reason why, on the present occasion, I should not follow the example of Linnaeus and Pallas.

7. U. Meles, vel Labradoria - American Badger - Until Sabine, in the appendix to Capt. Parry's Voyage to the Polar Sea, proved this animal to be a distinct species - it was always considered to be <sup>the</sup> same with the ~~mammalian~~ Badger of Europe. It is by no means a common animal, and its habits render it difficult of observation - frequenting the most solitary places, and burrowing in the earth; it roams abroad only during the night, and preys on every description of food that comes within its reach -

8. U. Lotor. Raccoon - When it is considered that the French were the first European settlers in Canada, and maintained so close an intercourse with it for a century and a half, - and carried on the fur-trade very extensively - it is really surprising Buffon should have asserted that the Raccoon is not found



in this country - whereas scarcely any of our wild animals are more common - and it spends the whole year with us - hibernating in hollow trees - ~~passing the winter~~ Several thousand of the skins of this animal are annually exported to Europe, and the United States of America, from the British Colonies and Territories on this continent - and it must be needless to describe an animal so universally well known -

## Genus X. Badger

Some modern writers have thought proper to distinguish the Badgers by a separate generic character; but, in this work, I have seen no good reason why they should be removed from the last mentioned family; in which Linnaeus placed them -

## Genus XI. Didelphis

### Opusum

#### Generic Character

Ten fore teeth in the upper jaw, and eight in the under one. Two canine teeth in both jaws - one on each side. These are long. Head long, and conical; nose pointed. Mouth wide. Tongue ciliated. Ears large - rounded - thin - and almost naked. Five separate toes on all the feet. Nails crooked. Tail long, round, and scaly. Hair inclined to be woolly. The tribe are furnished with a sort of pocket formed by a duplication of the skin of the belly in which the eggs (usually 13 in number) are situated, and in which the young brood have a refuge.



Species.

1. Didelphis - Virginiana - Virginian Opossum  
 or, the Common Opossum of North America  
 — ca —

It is not from my own knowledge that I insert this animal in the present catalogue; but, from the report of others, and rather with the hope of exciting inquiry - I am told several individuals have been seen on our western frontier, and on the shores of Lake Erie, but having no certain knowledge of the fact I dare not insist further upon it - It is one of the most remarkable of American quadrupeds - but its pro-  
 pensities are so troublesome to its neighbours, that I see no reason why we should be ambitious to claim it as one of our indigenous animals -

Genus - XII - Mustela

The Weasel

Generic Character

Six cutting teeth in each jaw; - those of the upper jaw erect, distinct, sharp pointed; - those of the lower jaw are blunter, and appear as if buddled together, and two of them stand with in the line of the rest - Two sharp canine teeth in each jaw - one on each side the incisors - The molar teeth are conical and cutting - The open jaws of all the genus exhibit a fearful display of destructive teeth - Head small, oval, flat; Ears small; body much elongated - legs short; five toes on each foot armed with sharp crooked claws - The whole tribe carnivorous, ferocious, insatiable - preying chiefly in the night.



## Species

1. *Mustela Canadensis* - The Fisher
2. *Mustela Americana* - The Skunk
3. *Mustela Martes* - The Martin
4. *Mustela Laticola* - The Sable
5. *Mustela Vison* - The Mink
6. *Mustela Furo* - The Ferret
7. *Mustela Vulgaris* - Com: Weasel
8. *Mustela Inconstans* - The Stoat
9. *Mustela Erminea* - The Ermine

This specification presents a most formidable list of a most formidable and numerous family - which is most destructive to all the smaller quadrupeds; to birds, to reptiles, to fish; in short to animal <sup>life</sup> in every shape that can be overcome by its members - who are all voracious - cruel - vindictive - blood thirsty - insatiable - leaving nothing alive it is in their power to destroy.

Long before I became acquainted with any of the works of Dr. Hall and Spurzheim, and other phrenologists - I had been struck, on dissecting various quadrupeds and birds, with the wonderful adaptation of certain parts and organs, to certain and particular ends, and was surprized to find the analogy run through nearly all the animals that came under my notice, even to the reptile tribes. I am not about to enter into any long or minute disquisition on this subject on the present occasion. but it will be readily believed that with



this preliminary experience, I became <sup>speedy</sup> convert to a theory that has met with more ridicule, and slight, than it merits. I mean the doctrine of Phrenology; and, whilst I am briefly noticing the Mustela family, I should scarcely be excused were I not to state, that no animals can furnish stronger confirmation of the truth of a part of this science, or theory, than every individual of the tribe, but some undoubtedly more than others. I am sorry I cannot at present lay my hand upon the skull of one of the larger species; but I take the liberty of enclosing, along with this essay, the skull of a Mink, that happens to be within reach, together with the skull of a Musk-Rat for the amusement of the Society, and I hope they will arrive in an unbroken state.

As I have stated, the Mink, in common with the rest of its tribe, is cruel, vindictive, blood-thirsty, and insatiable, to the last degree. The Musk-Rat, on the contrary, is one of the most harmless, and inoffensive, of creatures, quarrelling and interfering with no one—feeding on aquatic vegetables and roots, in the most sequestered spots, and chiefly under water. Let the two skulls be placed in close comparison, and it will immediately be seen that whilst the organ of destructiveness is larger, in proportion, in the Mink, perhaps, than could be discovered in any other animal, ~~it is~~ it is absolutely wanting in the harmless Musk-Rat.



I hope the Society will pardon what may be considered a digression, although in some measure connected with our subject.

The number of Fisher, Martin, and Mink Skins, annually exported from the British Possessions in North America - which together amount to nearly 60,000 - sufficiently indicate how numerous these animals are in this part of the world.

Some authors and travellers have imagined that the Skunk has only recently made its appearance in the Canadas, but it is undoubtedly one of the aboriginals of the Upper Province, where it is common. Notwithstanding the abominable odour which it can emit at pleasure - the flesh is said to be a palatable and delicate food.

I have inserted the Sable in our list because some ~~very~~ skins have been sent from the extreme parts in the North-West - which can only be attributed to that animal. They were sold by auction at one guinea, each before their superior quality, and distinct character was observed by competent judges.

The Herret exists, with us, only in a tamed, or domestic state.

The Stoat is not common. I have seen some four or five in a wild state - but not more. The Ermine, which is little more than half its size, is much more frequent - and is found to be dispersed over the whole of our possessions in North America.



Its fur is of a silky texture, and of the most exquisite fineness - As I have received a highly ornamented saddle, and horse - accoutrements, from the interior, that belonged to a Chief of the Sioux Nation - in part trimmed with the fur of this beautiful little animal - I conclude that it extends over all the plains of the Mississippi, and of the Missouri - Could they be obtained in sufficient abundance - their skins could not fail to be an article of lucrative commerce.

## Genus XIII. *Lutra*

### The Otter

#### Generic Character

Six incisor teeth in both jaws - two canine teeth in each jaw - and ten grinders, or molar teeth in each jaw. The canine teeth much hooked. Head broad and flat. Tongue somewhat papil-  
-lous; - Body long - stout - and low upon the legs - toes armed with hooked nails, and connected together, or webbed. The tail not quite so long as the body, but very strong, and depressed at the base. Body covered with soft fur - Carnivorous, and Amphibious -

### Species

- 1 - *Lutra* - *Canadensis* - Com<sup>n</sup> Otter
- 2 - *Lutra* - *Marina* - Sea Otter

Many authors have considered our Canadian Otter as a distinct species from the common Otter of Great Britain.



It is certainly often found of a much larger growth in these colonies than in Europe - and of a deeper brown or black, and its fur is of <sup>an</sup> infinity greater <sup>degree of</sup> fineness than the European specimens -; but I cannot find that the specific characters are essentially different -

The Sea Otter, which affords the finest and most costly fur in the whole world, is unknown on our northern, and atlantic, coasts; but, on the shores of the Pacific Ocean, and within our territories, it is not unfrequent - and furnishes the most valuable product, of all that country, to our traders

## Genus XIV. *Lepus*.

### The Hare

Belonging to the order Glires

#### Character of the Order.

Having two front teeth in each jaw, - usually very long, somewhat curved and large - but without any canine teeth - Their feet are furnished with claws - and they are formed both for running and leaping - Their diet is almost exclusively vegetable - One or two out of the ten genera which constitute this order, being found to use animal food in case of distress, or emergency -

#### Generic Character

Two fore teeth in each jaw; those in the upper are double, the interior ones being smallest - The fore feet have five toes each, and the hind feet but four - Their hind legs are much longer than the fore legs - whence arises their extraordinary speed and bounding leaps -



Species

1. Lepus variabilis - Varying Hare, or  
common Hare of  
Canada -
2. Lepus glacialis - Northern Hare
3. Lepus cuniculus - Common Rabbit

The first of these is the common Hare of Canada - which becomes of an entire white during winter, saving the tips of the ears, only, which remain dusky, or black - It never burrows, - particularly affects groves of young pine trees, leaves our severest winters without any other shelter than an old log, or root of a tree, and may be killed at all times. It is more numerous in the Upper, than in the Lower, Province -

For a knowledge of the second species we are indebted to Capt. Parry's Voyage to the Polar Seas. It is found throughout the extreme northern part, of this continent, and attains a large size -

We have no species of this genus, in its wild state that burrows in the ground - The common Rabbit being here known only in its domestic state -

o o o

## Genus. XV. - Castor

### The Beaver

#### Generic Character

Two incisor teeth, <sup>in each jaw</sup> very strong; no canines; Eight molar teeth in each jaw - Small eyes. Ears short and round. Five toes to each foot. Tail broad, depressed, naked, scaly. Two pouches containing odoriferous matter, on each side the male organ of generation.



1. Castor - Fiber - Common Beaver
2. Castor - Giganteus - Great Beaver
3. Castor - Canadensis - Musk Rat

It will be unnecessary to say anything of the common Beaver, in this place. No animal is better known; but, unless some means are taken to preserve the breed, this valuable creature will soon be lost to this country, as it has been already lost to most parts of Europe.

I have been induced to name the Great Beaver in this catalogue because there is pretty certain evidence of the existence of such an animal in various parts of the interior towards the north-west. The Indians of many tribes firmly believe in its existence, and assert they have often seen it. I will take, or endeavour to take, an early opportunity to lay before the Society such evidences as are in my possession to prove the fact; in the mean while, I will merely remark that the skull which was found on the banks of the Delaware nearly forty years ago - which induced the Naturalists of the United States to create a new genus under the title of Asteopera - and which skull is still preserved in the Philadelphia Museum - in my mind belonged, beyond all doubt, to this animal which is still in existence in our remote lakes and rivers in the interior.



The affinities between the Musk-Rat and the Beaver, are too close, and striking, to allow me to remove it from the Castor Family, as some modern writers have done. This animal, like the Beaver, is too well known to need any particular comment.

## Genus XVI. Hystrix.

### The Porcupine

#### Generic Character

Two fore teeth in each jaw, obliquely divided - no canine teeth - Eight molar teeth in both jaws - The Head is stout - Nose obtuse, thick, and tumid - Ears short and rounded - Tongue beset with spiny scales - The fore feet have the rudiment of a thumb, with an obtuse nail, and four toes - armed with powerful claws or nails -; The hind feet have five toes armed in like manner - Body covered with sharp quills - Herbivorous -

#### Species

1. Hystrix - Dorsata - American or Canadian Porcupine

I know but of one species, which is common in Upper Canada - although it is said that about Hudson's Bay there is a Porcupine entirely distinct from the H. Dorsata - but the reports are too vague to be admitted without further evidence - As the H. Dorsata has been well described I will merely remark that it affords an excellent dish for the table; and that I have myself witnessed the power <sup>it has</sup> to throw its quills at pleasure from the tail - a fact greatly doubted by all modern writers that I have



Genus. XVII. Arctomys

Marmot

Generic Character

Two very strong front teeth in each jaw -  
no canine teeth - Eight simple molars  
in the lower jaw, and two in the upper -  
Head large, round, but flat above -  
Body thick and clumsy. - Eyes large  
and full. - Ears short and rounded;  
but strong, and formed for burrowing;  
four toes, and the rudiment of a  
thumb, before -; and five toes behind.  
all the toes are armed with strong,  
compressed, and slightly crooked nails.

Species

1. Arctomys - Monax - Canadian Marmot
2. Arctomys - Missouriensis - Prairie Marmot
3. Arctomys - Empetra - Quebec Marmot
4. Arctomys - Tridecemlineata - Striped Marmot
5. Arctomys - Franklinii - The Franklin Marmot
6. Arctomys - Richardsonii - Tawny Marmot
7. Arctomys - Pruinosa - Hoary Marmot
8. Arctomys - Parryi - Grey Arctic Mar-  
mot

The first of these needs no comment,  
it is common and well known over all the  
provinces - by the name of Wood-chuck,  
or ground Hog - When fat, it makes a very  
palatable dish for the table.

2<sup>nd</sup> Species. is known almost throughout the  
plains of the interior by the familiar name  
of Prairie Dog. So Lewis and Clark designate  
it, in their Travels - It is a lively, sociable,  
animal, associating in large communities which  
are called "Prairie Dog Villages" by the Hunters



3<sup>rd</sup> Species. Amur Marmot, was long ago described by Pennant. but I have strong doubts of its identity - that is, until it is further and better determined, my present opinion is, that the A. Monax. the A. Empetrea and the A. Pruinosa are all of one and the same species. as I very well know that the common Marmot of Canada is subject to great vicissitude as to size and colour. I happened to be with a party of Indians when the first Pruinosa fell into my hands, and was congratulating myself on the discovery of a new species. The Indians smiled, and remarked that it was not an <sup>unusual</sup> ~~extraordinary~~ variety of the common species. I have, in this catalogue, continued the species separate, out of deference to respectable authors, until the matter can be fully determined, which I hope shortly to be able to do myself.

4<sup>th</sup> Species. This name Tridecemlineatus was, I believe, given to this beautiful and interesting species by Dr Mitchell of New York - and with great propriety - although he considered the animal as belonging to the genus Sciurus, rather than the Arctomys. Perhaps he has had reason to change that opinion - as the subject became better known. This species inhabits the northern parts of Canada - and the great plains - and the banks of the rivers, that intersect them as far as the Rocky Mountains. burrowing in the ground, and never ascending trees. It is distinguished by being of a deep chestnut colour, striped with six white lines, alternating with an equal number of longitudinal rows of white spots and white beneath producing a most pleasing effect.



The 5<sup>th</sup> & 6<sup>th</sup> Species are justly named after the two celebrated Travellers, Capt<sup>n</sup> Franklin, and Dr. Richardson. They are well described in the Linnean Transactions of London by Sabine. They inhabit the northern parts of our territory on this continent.

7<sup>th</sup> Species. I have already stated my opinion of this species. A description of it will be found in Pennant, Gmelin, Shaw and Schreber. Nevertheless, I must consider it a mere variety of the common species.

8<sup>th</sup> Species. The authority for the specific distinction of the A. Parryi is too good (Dr. Richardson) to be doubted. The animal was discovered many years ago, but not fully determined until late years. It has an extensive range in the northern parts of this continent.

## GENUS XVIII. Sciurus. \*

### Squirrel

#### Generic Character

It has two fore teeth in each jaw, the superior ones shaped like wedges, and the inferior ones sharp pointed. Some of the species are provided with hairy membranes, extended from the fore to the hind legs, by which they are enabled to bear themselves up in the air, and to float, as it were, from tree to tree. This genus may, therefore, with great propriety be separated into two divisions. Those with the membrane have been termed Petauri, or Flying Squirrels; and those without it, Sciuri Scandentes, or Climbing Squirrels.

\* Belonging to the Order Glires, already characterized.



Species

1. Sciurus - Cinereus - Large Gray Squirrel
2. Sciurus - Niger - Black Squirrel
3. Sciurus - macrodon, vel - } Large-tailed  
Magnicaudatus } Squirrel
4. Sciurus - Rudrivittatus - Little Striped Squirrel
5. Sciurus - Lateralis - Line-backed Squirrel
6. Sciurus - Grammurus - Line-tailed Sq<sup>d</sup>
7. Sciurus - Hudsonius - Com<sup>n</sup> American Squirrel
8. Sciurus - Striatus - Ground Squirrel
9. Sciurus - Ludovicianus - Broad-tailed Squirrel
10. Sciurus - Volucella - American Flying Squirrel

In so vast a region as North America where the forests are almost of interminable extent and where there is almost every possible variety of situation it <sup>may</sup> be easily imagined that Squirrels must exist in great variety, and in countless numbers, and such will be found to be the case. The foregoing specification of the Species hitherto discovered in the British Possessions, on this continent, comprehend, within two or three species, all that are known on the whole continent of North America.



1. S. Cinereus. This is remarkable for its nicety in the choice of situation - Its localities are limited to particular districts and it has so great an antipathy to the immediate neighbourhood of the smaller species that the moment the latter become as numerous as themselves; and as they imagine encroach on their borders they abandon the settlement and remove to other quarters - I do not know that they have ever been seen in Lower Canada and in Upper Canada they are confined to the London and Western District - with the exception of a very few in the Niagara and Gore Districts - On the north side of Lake Ontario they are unknown. They are usually found in companies of 20, 30, or upwards in a troop - and are exceedingly destructive - so much so that it was found necessary at one time to offer a premium of 3<sup>d</sup> of wheat in the United States for their destruction - and it may be conceived to what an extent these animals had increased in Pennsylvania - where in a single year (1749) - 1,200,000 were destroyed and the sum of £5000 sterling - was paid for their destruction - ! - They feed on all sorts of grain & nuts - and many kinds of fruit - Their flesh is delicious and a choice morsel on the table -

2. S. Niger - Black Squirrel - almost every where abundant in the Upper Province, but is not so common in the Lower Province of Canada. There is a singular antipathy existing between this species and the common red Squirrel - and they always fight



whenever they meet, and what is extraordinary, the little Red Squirrel, though not more than half the size of the Black Squirrel always proves victorious -

3. *S. Macrodonatus* } Large-tailed Squirrel  
<sup>macrodonatus, vel</sup>

It must not be understood that this is the Ceylon Squirrel of Pennant - because it has the same specific name - which is far more appropriate to the animal we claim for North America - the tail being larger, and more voluminous, in proportion to the size of the body - in the American, than in the Ceylonese, specimens - Total length of the American species is about one foot, seven inches, and a half - of which the tail, alone, is nine inches and a quarter - It is common on the banks of all the great rivers of the plains, as high as the Saskatchewan - and perhaps higher -

4. *S. Quadrimaculatus* - Little Striped Squirrel  
 a beautiful species - distinguished by four white lines upon its head - on a ground colour of ferrugineous brown - It is a small species - not exceeding, in its total length, including the tail, seven inches and a quarter - It is a native of the Rocky Mountains -

5. *S. Lateralis*. Line-backed Squirrel.  
 This is also a native of the Rocky Mountains - It is a ground Squirrel, bearing some resemblance to the common species (Striatus) but is larger - and undoubtedly distinct -

6. *S. Grammurus* - Line-tailed Squirrel  
 Another inhabitant of the Rocky Mountains where it dwells in holes or crevices of the rocks and feeds on the buds of the stunted shrubs which grow there - The fur is very coarse and it is remarkable for having 3 black lines on each side the tail -



4. S. Hudsonius. Common American Squirrel

This animal is universally spread over all the United States, and the British Possessions in North America, and is too well known to require any particular notice here

8. S. Striatus. Common Ground Squirrel

The same remarks as have been made on the preceding, apply to this species.

9. S. Ludovicianus. Broad-tailed-Squirrel.

This animal seems peculiar to the rivers, or rather to the banks of the rivers which fall into Lake Winnipeg. The upper parts are of a dark grey, and the under parts of a reddish-brown colour. The tail is longer than the body and is remarkable for its breadth.

10. S. Volucellus. Flying Squirrel. This interesting and beautiful creature is much more frequent in the Upper, than in the Lower, Province, Canada. It is, indeed, there common and remains all the year about its usual haunts - hibernating in old trees. It loves to sport on the wing around an aged oak or other tree during the fine nights of summer when the moon is brilliant - making the whole a sort of whistling or chirping noise.

GENUS XIX. - Gerbillus

Serboa.

Generic Character

Two incisors and six molar teeth in each jaw; - Head elongated; - Cheeks projecting; Fore feet very short & armed with claws - The hind feet very long - terminated likewise with clawed toes - Tail very long - and more or less hairy.



Species.

1. Gerbillus. Canadensis - { Canadian Jerboa  
Jumping <sup>or</sup> Mouse  
of  
Canada
2. Gerbillus - Labradorius - Labradorian  
Jerboa

The first species is well known - having been often described as the jumping mouse of Canada -; and, sometimes as the Fox Mouse - because of its colour - It is common throughout woods and fields of the British American Provinces -

The second species is considerably larger than the first, of a darker colour, and not so extensively spread; though it is found in all the British Provinces -

Genus. XX. Mus.The RatGeneric Character

Upper fore teeth wedge-shaped; - Three and sometimes only two grinders in each jaw; and the clavicles, or collar bones, are complete - Snout narrow, and elongated. Fore feet have four clawed toes, and a wart, having an obtuse nail, in place of a thumb - Hind feet have five clawed toes. Tail long, tapering, scaly, naked -

Species

1. Mus - Mattus - Black Rat
- 2 - Mus - Decumanus - Norway Rat
- 3 - Mus - Cinereus - Blue Rat
- 4 - Mus - Sylvaticus - Com.<sup>n</sup> Field Mouse
- 5 - Mus - Canadensis - Sheer Mouse



6. Mus - Aquaticus - Blue, or Marsh Mouse  
 7. Mus - Domesticus - Com.<sup>n</sup> House Mouse

This is one of the genera in which new discoveries may be expected. The Black Rat is known only in a few solitary places, as it is fast disappearing before the Grey Norwegian Species, while I am sorry to say is rapidly spreading over the country. It has arrived as far west as Kingston and Niagara; carried by vessels and in packages of goods; - but it has not yet surrounded the north shore of Lake Ontario -

The Blue, or cinereus Rat, is a newly discovered and undescribed species, inhabiting the eastern side of the Rocky Mountains, at their base. It is about the size of the Black Rat, with large membranous ears and of a fine cinereous colour much inclining to blue. It is an aboriginal of the country - and I believe peculiar to it.

The Sylvaticus - or Field Mouse, every where abounds. The fields and woods are literally overrun by them.

The species here termed Canadensis is now described - which is a little remarkable considering how numerous and destructive it is. I discovered it in England, in Lancashire, several years ago - and suppose it had been carried by ships to Liverpool. It abounds in Upper Canada and is an absolute pest to farmers destroying an incredible quantity of potatoes, carrots, parsnips, turnips, &c. - in short any and every kind of roots, and



fruit. In size it is between a mouse and a rat - of a dark, brownish, gray - with short legs, short rounded ears, a large head and a short tail. Living in fields in the summer and entering into vaults, and cellars, and root-houses in winter.

The Mus Aquaticus is also a new species discovered by myself in the great Marsh of the Don - near <sup>Trinity</sup> York in upper Canada about 4 years ago - whilst wading after water-fowl - since that time I have seen it in other marshy situations. It is the size of the common mouse of a fine bluish grey, or cinereous colour, with large, naked, ears. It is an excellent swimmer and often takes possession of the nests of the Reed-Wren.

## Genus. XXI. Sorex.

### Shrew

#### Generic Character

Two incisors in each jaw - Six canines in the upper jaw - with eight molars; and ten molar teeth in the lower jaw. Head long, nose elongated into a sort of snout and moveable - ears short and rounded - eyes small - tail long -

#### Species -

- |                                      |                    |
|--------------------------------------|--------------------|
| 1. <u>Sorex</u> - <u>Constrictus</u> | Thick-tailed Shrew |
| 2. <u>Sorex</u> - <u>aquaticus</u>   | Water Shrew        |
| 3. <u>Sorex</u> - <u>araneus</u>     | Fetid Shrew        |
| 4. <u>Sorex</u> - <u>parvus</u>      | Little Shrew       |

The whole of these are found in upper Canada - but how far they extend I do not yet know.



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Genus XXII. Talpa.  
Mole

Generic Character

Two incisive teeth, 6 canines, and 6 molars, in the upper jaw; - Four incisives - 6 canines, and 6 molars in the lower jaw - Snout much elongated, and terminating in a sort of cartilaginous button. Eyes very small, scarcely discernible - External ears wanting. Feet short and pentadactyle; nails, long, flat, and adapted for digging -

Species

1. Talpa Canadensis Canadian, or irradiated Mole

This well known species is peculiar to the North American Continent, and is sometimes found of a pure white. It is unknown in Europe -

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Division III

Or, Pinnated, Animals - living chiefly in water, and preying partly on fish and partly on herbage -

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Genus XXIII. Trichechus  
Morse

Two incisives in the upper jaw - and 2 canines and Ten Molars; - no incisives - no canines, and ten molars in the under jaw - The two superior canines are in fact enormous tusks longer than the head, which is round and ~~enormous~~ <sup>enormous</sup> the snout appears if swollen



Tail very short - anterior feet as pins like those of the seal, with five toes armed with very sharp nails - Hind feet in the same direction as the body with five toes united by a membrane - Body large and elongated like that of a seal

### Species

1. Trichechus rosmarus - The Horse

This huge animal sometimes attains the length of 10 feet - It was formerly common in the Gulf of St. Lawrence - It is now rare in that quarter but is still sufficiently common farther to the North -

### Genus. XXIV. Phoca

#### Seal

1. Phoca cristata - Sea Lion  
 2. Phoca vitulina - Common Seal  
 3. Phoca groenlandica - Greenland Seal



Winged, or the connecting link  
between Quadrupeds and Birds.

Genus XXVI. Vesperugo

Bat

- |                     |                   |                        |
|---------------------|-------------------|------------------------|
| 1. <u>Vesperugo</u> | <u>Prunus</u>     | <u>Hoary Bat</u>       |
| 2. <u>V</u>         | <u>Arqueatus</u>  | <u>Large-headed</u>    |
| 3. <u>V</u>         | <u>Murinus</u>    | <u>Bat</u>             |
| 4. <u>V</u>         | <u>Activolans</u> | <u>Common Bat</u>      |
|                     |                   | <u>Hig. flying Bat</u> |

Vesperugo

Generic Character

Teeth erect, sharp pointed, approximated;  
Hands palmated; with a membrane sur-  
rounding the body, and enabling the ani-  
mal to fly; Tail long, and comprised in  
the interfemoral membrane; Fur soft  
and thick - Nocturnal - Insectivorous -  
Hibernating in caves and old trees;  
hanging by the hind claws, with the  
head downward - and the whole body  
enveloped in the wing membrane -







## Notes

Containing some ommissions and remarks

I would not have it understood that I assert the true Rein-Deer of the North of Europe is not found in America; but, that it is not found so low down as any of our settlements south of Shedden's Bay; and, further, that the Cariboo - although bearing some similitude to the Rein-deer is a distinct species - I am not without suspicion that the animal I have named the Leper Cariboo, and the Virginian Deer, are mere varieties of the same species -

I ought to have qualified my assertion respecting the Moose-Deer somewhat more than I have done. They are found and killed every winter in greater or less numbers, in the Attawapa District - but further to the westward they are certainly rare

### The Moose

Some particulars respecting the Moose - in the Gulf of St. Lawrence - were found in Hakluyt's Voyages - In the year 1591. Fifteen Hundred were killed by a small bark at Ramea -

### Seals

The common Seal sometimes occurs in the St. Lawrence - and they have been more than once taken in Lake Ontario



The larger kinds especially the Phoca  
Cristata, and Barbata, and Urgina - are  
found only in our northern seas -

### Bat

I have frequently caught the common  
Bat of England - in this country - also the  
Long-eared species, and the Attirolans - or  
Night-flying Bat - I have not yet met  
with the Horse-shoe-Bat; - though I have  
been told of a variety which I take to be  
of this species -

The V. Prinosus - is not common in  
the settled parts of Canada - but it is  
more frequent in the interior, and desert  
parts of the country, towards the west -

I have never seen more than one  
specimen of the Red Bat or Vesperugo  
Rufus - It was flying abroad at noon  
day - on the Banks of the Don, near  
York, in the month of October; and, at  
first sight, I could not conceive what  
it was - I was, at the time, in pursuit  
of Woodcocks, and shot it on the wing.  
It is a rare species in Canada - Although  
said to be common in Pennsylvania -

### Genus Omitted.

I find that I have omitted one of our most  
curious animals in its proper place - It is  
the My. Burserius of Linnaeus - and the  
My. Saccatus of Mitchell - Its peculiarities,  
however, both as to form and habits, clearly  
entitle it to a generic, as well as to a spe-  
cific distinction; uniting, as it does, some of  
the characteristics of the Hamsters, the Moles  
and the Rats - yet differing from them all.



Genus Pseudoskoma

Pouched Burrower

Generic Character

Two incisors - no canines - and eight molar  
teeth in each jaw -; - The incisors, which  
are truncated, and very long and strong - are  
not covered by the lips, but remain always  
exposed to view; - The molars of the up-  
per jaw incline backwards, those of the  
lower jaw, forwards; - Head and body large  
producing a clumsy appearance - It has two  
enormous cheek pouches - exterior to, but open-  
ing downwards, and towards, the mouth -  
they are concave, hairy, and separated by  
the ordinary integuments - Legs short - fore-  
feet large and formed for burrowing; - The  
hind feet are small

Species

1. Pseudoskoma Burgaricus - Pouched Bur-  
rower, or Canada Rat  
or Sand Rat, or Pouched  
Rat.

Of a reddish brown colour, with white  
feet - large cheek pouches, covered with  
hair, both within and without - Eyes  
black -; short ears, scarcely perceptible; -  
have five toes. middle nail of the fore-  
feet much longer than the rest - Tail short  
and twisting - hairy at base - naked at the tip

This animal burrows with a degree of  
excavation superior even to that of the  
Moles and Marmots. and cannot easily  
be taken - It is indeed very rarely seen  
although it is by no means uncommon  
in the western parts of Canada - and  
in the sandy parts of the great plain  
stretching towards the Rocky Moun-  
tains -







## Recapitulation

By the preceding catalogue it will be seen that the British North American Populations afford more than one half of all the Quadrupeds which Buffon allows to exist on the entire face of the globe - It is true many species here set down were unknown to that distinguished Naturalist; and, it is equally true, that many more remain to be discovered: - this remark is made not so much for the gratification of our national vanity, as for the purpose of exciting still further inquiry -

Upon the whole, we may congratulate ourselves that the ferocious animals bear no comparison, either as numbers or formidability, with those <sup>are, or</sup> that may be rendered, of utility to man - North America presents a wide field for observation - research, and experiment; - and it is highly gratifying to reflect on what may be accomplished by the exertions of two such respectable establishments, as the Historical Society of Quebec; and, the Natural History Society of Montreal - These institutions deserve the thanks and the best wishes of the benevolent Public -

"Eto Perpetua"!























as a little  
too long — in proportion



